

IN THE CLAIMS:

Please amend the claims as follows, substituting any amended claim(s) for the corresponding pending claim(s):

1 *B1* 1. (twice amended) A method of configuring a first network device for connection to a
2 communications network subnet having a second network device, the method comprising:
3 determining, with a configuration determination module of the first network device,
4 configuration attributes for operably connecting the first network device to the subnet based on
5 configuration information for the subnet detected by the first network device; and
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C1 configuring the first network device, with an autoconfiguration module of the first
network device, according to the configuration attributes so that the first network device is operably
8 connected to the subnet.

1 2. (unchanged) A method according to claim 1, wherein configuring the first network device is
2 performed automatically by the autoconfiguration module.

1 3. (unchanged) A method according to claim 1, wherein configuring the first network device is
2 performed as a guided process in which the autoconfiguration module interacts with a user and
3 presents to the user suggested configuration choices based on the configuration attributes.

1 4. (unchanged) A method according to claim 3, wherein the suggested configuration choices are
2 accompanied by an explanation to the user as to why the configuration choices have been suggested.

1 5. (amended) A method according to claim 1, wherein the configuration attributes comprise an
b2 Internet Protocol (IP) subnet mask determined based upon the configuration information unique to
3 the subnet and derived from passively listening to router control traffic detected by the first network
4 device at interfaces between the first network device and the subnet.

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C1 1 6. (unchanged) A method according to claim 1, wherein the configuration attributes comprise at
2 least one of Dynamic Host Configuration Protocol (DHCP) forwarding data and DHCP server
3 address.

b3 1 7. (amended) A method according to claim 1, wherein the configuration attributes comprise virtual
2 local area network (VLAN) information including tag identifications, types, protocols, addresses,
3 and port-to-VLAN mappings.

1 8. (unchanged) A method according to claim 1, wherein the configuration attributes comprise at
2 least one of Spanning Tree Group information, Simple Network Management Protocol (SNMP)
3 server addresses, Open Shortest Path First (OSPF) timer information, Routing Information Protocol
4 (RIP) broadcast timer information, and Virtual Router Redundancy Protocol (VRRP) information.

1 9. (amended) A method according to claim 1, wherein the step of determining configuration
2 attributes further comprises communicating with a network centralized configuration server.

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1 10. (unchanged) A method according to claim 9, wherein the network centralized configuration
2 server uses Simple Network Management Protocol (SNMP) to communicate.

1 11. (amended) A method according to claim 9, wherein the step of communicating with a network
2 centralized configuration server comprises:
3 sending to the centralized configuration server a message containing the addresses
4 of network neighbors on the subnet;
5 searching in a configuration database of the centralized configuration server for
6 configuration attributes relevant to the first network device; and
7 forwarding the configuration attributes from the configuration database to the first
8 network device.

1 12. (amended) A method according to claim 1, wherein the step of determining configuration
2 attributes further comprises communicating with the second network device.

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1 13. (amended) A method according to claim 12, wherein the step of communicating with the second
2 network device uses a protocol based on Internet Control Message Protocol (ICMP) or User
3 Datagram Protocol (UDP).

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1 14. (amended) A method according to claim 1, wherein the step of determining configuration
2 attributes comprises analyzing routing protocol control packets detected by the first network device.

1 15. (twice amended) An autoconfiguring data router connected to a communications network subnet
2 having a second network data router, the autoconfiguring data router comprising:

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3 a configuration determination module that determines configuration attributes for
4 operably connecting the autoconfiguring data router to the subnet based on configuration information
5 for the subnet detected by the autoconfiguring data router; and

6 an autoconfiguration module that configures the autoconfiguring data router according
7 to the configuration attributes so that the autoconfiguring data router is operably connected to the
8 subnet.

1 16. (unchanged) An autoconfiguring data router according to claim 15, wherein the
2 autoconfiguration module configures the autoconfiguring data router automatically.

1 17. (unchanged) An autoconfiguring data router according to claim 15 wherein the
2 autoconfiguration module configures the autoconfiguring data router using a guided process in which
3 the autoconfiguration module interacts with a user and presents to the user suggested configuration
4 choices based on the configuration attributes.

1 18. (unchanged) An autoconfiguring data router according to claim 17, wherein the
2 autoconfiguration module accompanies the suggested configuration choices with an explanation to
3 the user as to why the configuration choices have been suggested.

1 19. (amended) An autoconfiguring data router according to claim 15, wherein the network attributes
2 comprise an Internet Protocol (IP) subnet mask determined based upon the configuration information
3 unique to the subnet and derived from passively listening to router control traffic detected by the
4 autoconfiguring data router at interfaces between the first network device and the autoconfiguring
5 data router.

1 20. (unchanged) An autoconfiguring data router according to claim 15, wherein the configuration
2 attributes comprise at least one of Dynamic Host Configuration Protocol (DHCP) forwarding data
3 and DHCP server address.

1 21. (amended) An autoconfiguring data router according to claim 15, wherein the configuration
2 attributes comprise virtual local area network (VLAN) information including tag identifications,
3 types, protocols, addresses, and port-to-VLAN mappings.

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1 22. (unchanged) An autoconfiguring data router according to claim 15, wherein the configuration
2 attributes comprise at least one of Spanning Tree Group information, Simple Network Management
3 Protocol (SNMP) server addresses, Open Shortest Path First (OSPF) timer information, Routing
4 Information Protocol (RIP) broadcast timer information, and Virtual Router Redundancy Protocol
5 (VRRP) information.

1 23. (unchanged) An autoconfiguring data router according to claim 15, wherein the configuration
2 determination module communicates with a network centralized configuration server to determine
3 the configuration attributes.

1 24. (unchanged) An autoconfiguring data router according to claim 23, wherein the network
2 centralized configuration server uses Simple Network Management Protocol (SNMP) to
3 communicate with the configuration determination module.

1 25. (unchanged) An autoconfiguring data router according to claim 15, wherein the configuration
2 determination module receives relevant configuration attributes from the centralized configuration
3 server .

Sub C1 1 26. (unchanged) An autoconfiguring data router according to claim 15, wherein the configuration
2 determination module communicates with a second network data router to determine the
3 configuration attributes.

1 27. (unchanged) An autoconfiguring data router according to claim 26, wherein the configuration
2 determination module uses a protocol based on Internet Control Message Protocol (ICMP) or User
3 Datagram Protocol (UDP) to communicate with the second network data router.

1 28. (unchanged) An autoconfiguring data router according to claim 15, wherein the configuration
2 determination module analyzes routing protocol control packets detected by the autoconfiguring data
3 router to determine the configuration attributes.

1 29. (twice amended) A computer network having at least one subnetwork, the at least one
2 subnetwork having a plurality of data routers that communicate data packets over the network, the
3 subnetwork including at least one autoconfiguring data router, the at least one autoconfiguring data
4 router comprising:

5 a configuration determination module that determines configuration attributes for
6 operably connecting the autoconfiguring data router to the subnet based on configuration information
7 for the subnet detected by the autoconfiguring data router; and

8 an autoconfiguration module that configures the autoconfiguring data router according
9 to the configuration attributes so that the autoconfiguring data router is operably connected to the
10 subnet.

1 30. (unchanged) A computer network according to claim 29, wherein the autoconfiguration module
2 configures the autoconfiguring data router automatically.

1 31. (unchanged) A computer network according to claim 29, wherein the autoconfiguration module
2 configures the autoconfiguring data router using a guided process in which the autoconfiguration
3 module interacts with a user and presents to the user suggested configuration choices based on the
4 configuration attributes.

1 32. (unchanged) A computer network according to claim 31, wherein the autoconfiguration module
2 accompanies the suggested configuration choices with an explanation to the user as to why the
3 configuration choices have been suggested.

1 33. (amended) A computer network according to claim 29, wherein the network attributes comprise
B20 an Internet Protocol (IP) subnet mask determined based upon the configuration information unique
3 to the subnet and derived from passively listening to router control traffic detected by the first
4 network device at interfaces between the first network device and the subnet.

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1 34. (unchanged) A computer network according to claim 29, wherein the configuration attributes
2 comprise at least one of Dynamic Host Configuration Protocol (DHCP) forwarding data and DHCP
3 server address.

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1 35. (amended) A computer network according to claim 29, wherein the configuration attributes
2 comprise virtual local area network (VLAN) information including tag identifications, types,
3 protocols, addresses, and port-to-VLAN mappings.

1 36. (unchanged) A computer network according to claim 29, wherein the configuration attributes
2 comprise at least one of Spanning Tree Group information, Simple Network Management Protocol
3 (SNMP) server addresses, Open Shortest Path First (OSPF) timer information, Routing Information
4 Protocol (RIP) broadcast timer information, and Virtual Router Redundancy Protocol (VRRP)
5 information.

Sub C 1 37. (unchanged) A computer network according to claim 29, wherein the configuration
determination module communicates with a network centralized configuration server to determine
the configuration attributes.

1 38. (unchanged) A computer network according to claim 37, wherein the network centralized
2 configuration server uses Simple Network Management Protocol (SNMP) to communicate with the
3 configuration determination module.

1 39. (unchanged) A computer network according to claim 37, wherein the configuration
2 determination module receives relevant configuration attributes from the centralized configuration
3 server .

1 40. (unchanged) A computer network according to claim 29, wherein the configuration
2 determination module communicates with a second network data router to determine the
3 configuration attributes.

Sub C 41. (unchanged) A computer network according to claim 40, wherein the configuration
2 determination module uses a protocol based on Internet Control Message Protocol (ICMP) or User
3 Datagram Protocol (UDP) to communicate with the second network data router.

1 42. (unchanged) A computer network according to claim 29, wherein the configuration
2 determination module analyzes routing protocol control packets detected by the autoconfiguring data
3 router to determine the configuration attributes.

1 43. (twice amended) A computer program product for use on a computer system for configuring a
2 first network device for connection to a communications network subnet having a second network
3 device, the computer program product comprising a computer-usable medium having computer-
4 readable program code thereon, the computer readable program code including:
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6 program code for determining configuration attributes for operably connecting the
7 first network device to the subnet based on configuration information for the subnet detected by the
8 first network device; and

9 program code for configuring the first network device according to the configuration
attributes so that the first network device is operably connected to the subnet.

1 44. (unchanged) A computer program product according to claim 43, wherein configuring the first
2 network device is performed automatically by the autoconfiguration module.

1 45. (unchanged) A computer program product according to claim 43, wherein configuring the first
2 network device is performed as a guided process in which the autoconfiguration module interacts
3 with a user and presents to the user suggested configuration choices based on the configuration
4 attributes.

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1 46. (unchanged) A computer program product according to claim 45, wherein the suggested
2 configuration choices are accompanied by an explanation to the user as to why the configuration
3 choices have been suggested.

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1 47. (amended) A computer program product according to claim 43, wherein the configuration
2 attributes comprise an Internet Protocol (IP) subnet mask determined based upon the configuration
3 information unique to the subnet and derived from passively listening to router control traffic
4 detected by the first network device at interfaces between the first network device and the subnet.

1 48. (unchanged) A computer program product according to claim 43, wherein the configuration
2 attributes comprise at least one of Dynamic Host Configuration Protocol (DHCP) forwarding data
3 and DHCP server address.

1 49. (amended) A computer program product according to claim 43, wherein the configuration
B24 attributes comprise virtual local area network (VLAN) information including tag identifications,
3 types, protocols, addresses, and port-to-VLAN mappings.

1 50. (unchanged) A computer program product according to claim 43, wherein the configuration
2 attributes comprise at least one of Spanning Tree Group information, Simple Network Management
3 Protocol (SNMP) server addresses, Open Shortest Path First (OSPF) timer information, Routing
SUB CI5 Information Protocol (RIP) broadcast timer information, and Virtual Router Redundancy Protocol
(VRRP) information.

1 51. (unchanged) A computer program product according to claim 43, wherein the program code for
2 determining configuration attributes further comprises program code for communicating with a
3 network centralized configuration server.

1 52. (unchanged) A computer program product according to claim 51, wherein the network
2 centralized configuration server uses Simple Network Management Protocol (SNMP) to
3 communicate.

1 53. (unchanged) A computer program product according to claim 51, wherein the program code for
2 communicating with a network centralized configuration server comprises:

3 program code for sending to the centralized configuration server a message containing
4 the addresses of network neighbors on the subnet;

5 program code for searching in a configuration database of the centralized
6 configuration server for configuration attributes relevant to the first network device; and

7 program code for forwarding the configuration attributes from the configuration
8 database to the first network device.

1 54. (unchanged) A computer program product according to claim 43, wherein the program code for
2 determining configuration attributes further comprises program code for communicating with the
3 second network device.

1 55. (unchanged) A computer program product according to claim 54, wherein the program code for
2 communicating with the second network device uses a protocol based on Internet Control Message
3 Protocol (ICMP) or User Datagram Protocol (UDP).

1 56. (unchanged) A computer program product according to claim 43, wherein the program code for
2 determining configuration attributes comprises program code for analyzing routing protocol control
3 packets detected by the first network device.

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2 57. (twice amended) An autoconfiguring data router connected to a communications network subnet
having a second network data router, the autoconfiguring data router comprising:

3 means for determining configuration attributes for operably connecting the
4 autoconfiguring data router to the subnet based on configuration information for the subnet detected
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61 by the autoconfiguring data router; and

means for configuring the autoconfiguring data router according to the configuration
7 attributes so that the autoconfiguring data router is operably connected to the subnet.

1 58. (unchanged) An autoconfiguring data router according to claim 57, wherein the means for
2 configuring the autoconfiguring data router operates automatically.

1 59. (unchanged) An autoconfiguring data router according to claim 57, wherein the means for
2 configuring the autoconfiguring data router uses a guided process in which the means for
3 configuring interacts with a user and presents to the user suggested configuration choices based on
4 the configuration attributes.

1 60. (unchanged) An autoconfiguring data router according to claim 59, wherein the suggested
2 configuration choices are accompanied by an explanation to the user as to why the configuration
3 choices have been suggested.

1 61. (amended) An autoconfiguring data router according to claim 57, wherein the configuration
2 attributes comprise an Internet Protocol (IP) subnet mask determined based upon the configuration
3 information unique to the subnet and derived from passively listening to router control traffic
4 detected by the first network device at interfaces between the first network device and the subnet.

1 62. (unchanged) An autoconfiguring data router according to claim 57, wherein the configuration
2 attributes comprise at least one of Dynamic Host Configuration Protocol (DHCP) forwarding data
3 and DHCP server address.

1 63. (amended) An autoconfiguring data router according to claim 57, wherein the configuration
2 attributes comprise virtual local area network (VLAN) information including tag identifications,
3 types, protocols, addresses, and port-to-VLAN mappings.

1 64. (unchanged) An autoconfiguring data router according to claim 57, wherein the configuration
2 attributes comprise at least one of Spanning Tree Group information, Simple Network Management
3 Protocol (SNMP) server addresses, Open Shortest Path First (OSPF) timer information, Routing
4 Information Protocol (RIP) broadcast timer information, and Virtual Router Redundancy Protocol
5 (VRRP) information.

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1 65. (unchanged) An autoconfiguring data router according to claim 57, wherein the means for
2 determining configuration attributes further comprises means for communicating with a network
3 centralized configuration server.

1 66. (unchanged) An autoconfiguring data router according to claim 65, wherein the network
2 centralized configuration server uses Simple Network Management Protocol (SNMP) to
3 communicate with the means for communicating.

1 67. (unchanged) An autoconfiguring data router according to claim 65, wherein the means for
2 communicating with a network centralized configuration server comprises:

3 means for sending to the centralized configuration server a message containing the
4 addresses of network neighbors on the subnet;

5 means for searching in a configuration database of the centralized configuration server
6 for configuration attributes relevant to the autoconfiguring data router; and

7 means for forwarding the configuration attributes from the configuration database to
8 the autoconfiguring data router.

1 68. (unchanged) An autoconfiguring data router according to claim 57, wherein the means for
2 determining configuration attributes further comprises means for communicating with the second
3 network data router.

1 69. (unchanged) An autoconfiguring data router according to claim 68, wherein the means for
2 communicating with the second network data router uses a protocol based on Internet Control
3 Message Protocol (ICMP) or User Datagram Protocol (UDP).

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70. (unchanged) An autoconfiguring data router according to claim 57, wherein the means for determining configuration attributes further comprises means for analyzing routing protocol control packets detected by the autoconfiguring data router.